

We claim:

1. An axle saddle for welding to a cylindrical vehicle axle and a rocker- or control-beam of a vehicular suspension system, comprising:

a body forming generally a longitudinal slice of a cylinder, sized to fit closely around a portion of the cylindrical vehicle axle;

said body extending longitudinally between spaced, arcing lateral edges as well as extending in a cylindrical plane between spaced longitudinal edges, said longitudinal edges adapted for forming welded seams to or with the vehicle axle;

said body being formed with at least one longitudinally elongated, slot aperture that is proximately associated and aligned in a generally parallel relation with at least one longitudinal edge, said slot aperture providing an endless weld track and relieving in part the stress load carried through the welded seam of the associated longitudinal edge.

2. The axle saddle of claim 1 further comprising the body at at least one of the longitudinal edges being formed with a recessed-in weld track, having a major longitudinal track portion being flanked between opposite incurved curved portions, wherein said incurved curved portions reduce weld undercutting problems.

3. The axle saddle of claim 1 further comprising the body at at least one of the longitudinal edges having spaced wing extensions to further elongate the measure of said longitudinal edge; said body at that at least one longitudinal edge being formed with a recessed-in weld track, having a major longitudinal track portion being flanked between opposite incurved curved portions, wherein said incurved curved portions reduce weld undercutting problems.

4. An axle saddle for welding to a cylindrical vehicle axle and a rocker- or control-beam of a vehicular suspension system, comprising:

a body forming generally a longitudinal slice of a cylinder, sized to fit closely around a portion of the cylindrical vehicle axle;

said body extending longitudinally between spaced, arcing lateral edges as well as extending in a cylindrical plane between spaced longitudinal edges, said longitudinal edges adapted for forming welded seams to or with the vehicle axle;

said body having, along at least one of the longitudinal edges, spaced wing extensions to further elongate the measure of said longitudinal edge; said body at that at least one longitudinal edge being formed with a recessed-in weld track, having a major longitudinal track portion being flanked between opposite incurved curved portions, wherein said incurved curved portions reduce weld undercutting problems.

5. The axle saddle of claim 4 further comprising the body being formed with at least one longitudinally elongated, slot aperture that is proximately associated and aligned in a generally parallel relation with at least one longitudinal edge, said slot aperture providing an endless weld track and relieving in part the stress load carried through the welded seam of the associated longitudinal edge.

6. A rocker-to-hanger rocking axis alignment system for a vehicular suspension, comprising:

a pivot pin;

a hanger adapted for fixing underneath a vehicle or framework thereof and having spaced inboard and outboard flanges cooperatively formed with slotted apertures for receiving the pivot pin therethrough;

a rocker- or control-beam terminating at one end in a pivot head sized and adapted for pivotally coupling relative to the flanges of the frame hanger and having a transverse bore adapted for receiving and being pivotally mounted on the pivot pin;

a gear rack fixed to one or the other of the hanger's flanges and spaced from the slotted aperture;

an alignment lever having an aperture for receiving and driving the pivot pin between opposite extremes of adjustable positions relative the hanger flanges' slotted apertures, and also having a perimeter section formed with gear teeth sized and arranged for meshing with the gear rack and further having a crank attachment structure adapted for accepting a releasably coupled drive crank which allows a worker to input a cranking force to the alignment lever in order to move the pivot pin to any of various alignment positions therefor; and

a clamping construction affording the worker the opportunity to clamp tight a chosen alignment for the rocker- or control-beam's axis of pivot relative to the hanger.

7. A combination vehicular suspension system and shock-absorber protection subsystem comprising:

a downwardly extending rocker hanger;

a rocker- or control-beam extending between first and second ends, wherein the first end is pivotally connected to said hanger;

said beam, proximate the second end, being adapted for securing to an axle of the vehicle;

a shock absorber having first and second ends, wherein the first end is pivotally mounted on an axis that is fixed relative to the hanger and wherein the second end is pivotally mounted to the beam intermediate the beam's first and second ends; and

a tether anchored at one end to the hanger and anchored at the other end thereof to the beam intermediate the beam's first and second ends, wherein said tether is sized and arranged to determine a limit of extension for the shock absorber's travel between extension and retraction strokes, such that below the limit of extension the tether is slack and does not interfere with the work of the shock absorber, and at the limit of extension the tether is taut and disallows any further extension of the shock absorber.

8. The combination of claim 7 wherein the tether comprises a chain.

9. The combination of claim 7 wherein the shock absorber's first end is pivotally attached whereby said combination vehicular suspension system and shock-absorber protection subsystem is a complete package in the sense that an installer need not make a connection to the vehicle or the framework thereof for an independent purpose specific to the shock-absorber protection subsystem.

10. An axle suspension system for a wheeled vehicle, comprising;

a downwardly extending rocker hanger;

a rocker- or control-beam having first and second ends, wherein the first end is pivotally connected to said hanger;

an axle saddle generally comprising a longitudinally sliced cylinder and provided for interconnecting the beam with an axle of the vehicle;

wherein said beam comprises a pair of channel members arranged edge-to-edge and welded with first and second seams of butt welds to form a rectangular or square tube;

said beam further being arranged such that the first and second weld seams are situated along the tube's top and bottom walls, whereby the each channel member's web section forms one or the other of the tube's lateral walls;

said beam being further formed with a partial cylindrical socket through the top wall, and partly into the lateral walls of the tube, for accepting docking of the axle saddle; and

a welded interconnection between the beam and axle saddle comprising a generally linear seam along the tube's top wall and laterally-spaced arcuate seams, respectively, in the respective spaced lateral walls of the tube.

11. The axle suspension system of claim 10 wherein the channel members are formed before welding together for resulting in the tube tapering slightly along the extension thereof.